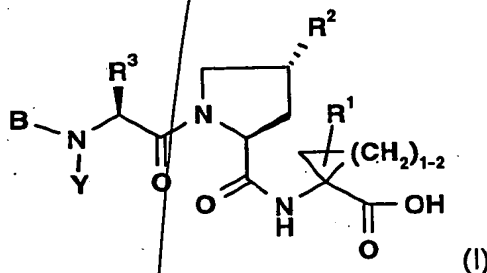


CLAIMS

WHAT IS CLAIMED IS:

1. A compound of formula (I) comprising the scope of the invention are racemates, diastereoisomers and optical isomers of



wherein **B** is H, a C₆ or C₁₀ aryl, C₇₋₁₆ aralkyl; Het or (lower alkyl)-Het, all of which optionally substituted with C₁₋₆ alkyl; C₁₋₆ alkoxy; C₁₋₆ alkanoyl; hydroxy; hydroxyalkyl; halo; haloalkyl; nitro; cyano; cyanoalkyl; amino optionally substituted with C₁₋₆ alkyl; amido; or (lower alkyl)amide; or **B** is an acyl derivative of formula R₄-C(O)-; a carboxyl of formula R₄-O-C(O)-; an amide of formula R₄-N(R₅)-C(O)-; a thioamide of formula R₄-N(R₅)-C(S)-; or a sulfonyl of formula R₄-SO₂ wherein

- R₄ is (i) C₁₋₁₀ alkyl optionally substituted with carboxyl, C₁₋₆ alkanoyl, hydroxy, C₁₋₆ alkoxy, amino optionally mono- or di-substituted with C₁₋₆ alkyl, amido, or (lower alkyl) amide;
- (ii) C₃₋₇ cycloalkyl, C₃₋₇ cycloalkoxy, or C₄₋₁₀ alkylcycloalkyl, all optionally substituted with hydroxy, carboxyl, (C₁₋₆ alkoxy)carbonyl, amino optionally mono- or di-substituted with C₁₋₆ alkyl, amido, or (lower alkyl) amide;
- (iii) amino optionally mono- or di-substituted with C₁₋₆ alkyl; amido; or (lower alkyl)amide;
- (iv) C₆ or C₁₀ aryl or C₇₋₁₆ aralkyl, all optionally substituted with C₁₋₆ alkyl, hydroxy, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C₁₋₆ alkyl; or
- (v) Het or (lower alkyl)-Het, both optionally substituted with C₁₋₆ alkyl, hydroxy, amido, (lower alkyl) amide, or amino optionally mono- or di-substituted with C₁₋₆ alkyl;

R₅ is H or C₁₋₆ alkyl;

with the proviso that when R₄ is an amide or a thioamide, R₄ is not (ii) a cycloalkoxy;

Y is H or C₁₋₆ alkyl;

R^3 is C_{1-8} alkyl, C_{3-7} cycloalkyl, or C_{4-10} alkylcycloalkyl, all optionally substituted with hydroxy, C_{1-6} alkoxy, C_{1-6} thioalkyl, amido, (lower alkyl)amido, C_6 or C_{10} aryl, or C_{7-16} aralkyl;

R_2 is CH_2-R_{20} , $NH-R_{20}$, $O-R_{20}$ or $S-R_{20}$, wherein R_{20} is a saturated or unsaturated C_{3-7} cycloalkyl or C_{4-10} (alkylcycloalkyl), all of which being optionally mono-, di- or tri-substituted with R_{21} ,

or R_{20} is a C_6 or C_{10} aryl or C_{7-14} aralkyl, all optionally mono-, di- or tri-substituted with R_{21} ,

or R_{20} is Het or (lower alkyl)-Het, both optionally mono-, di- or tri-substituted with R_{21} ,

wherein each R_{21} is independently C_{1-6} alkyl; C_{1-6} alkoxy; lower thioalkyl; sulfonyl; NO_2 ; OH; SH; halo; haloalkyl; amino optionally mono- or di-substituted with C_{1-6} alkyl, C_6 or C_{10} aryl, C_{7-14} aralkyl, Het or (lower alkyl)-Het; amido optionally mono-substituted with C_{1-6} alkyl, C_6 or C_{10} aryl, C_{7-14} aralkyl, Het or (lower alkyl)-Het; carboxyl; carboxy(lower alkyl); C_6 or C_{10} aryl, C_{7-14} aralkyl or Het, said aryl, aralkyl or Het being optionally substituted with R_{22} ;

wherein R_{22} is C_{1-6} alkyl; C_{3-7} cycloalkyl; C_{1-6} alkoxy; amino optionally mono- or di-substituted with C_{1-6} alkyl; sulfonyl; (lower alkyl)sulfonyl; NO_2 ; OH; SH; halo; haloalkyl; carboxyl; amide; (lower alkyl)amide; or Het optionally substituted with C_{1-6} alkyl;

R^1 is H; C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{2-6} alkenyl, or C_{2-6} alkynyl, all optionally substituted with halogen;

or a pharmaceutically acceptable salt or ester thereof.

2. A compound of formula I according to claim 1, wherein
 B is a C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amido, or amino optionally substituted with C_{1-6} alkyl; or
 B is Het or (lower alkyl)-Het, all optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amido, or amino optionally substituted with C_{1-6} alkyl.
3. A compound of formula I according to claim 1, wherein B is R_4-SO_2 wherein R_4 is C_{1-6} alkyl; amido; (lower alkyl)amide; C_6 or C_{10} aryl, C_{7-14} aralkyl or Het, all optionally

substituted with C₁₋₆ alkyl.

4. A compound of formula I according to claim 1, wherein **B** is an acyl derivative of formula R₄-C(O)- wherein R₄ is

- (i) C₁₋₁₀ alkyl optionally substituted with carboxyl, hydroxy or C₁₋₆ alkoxy, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C₁₋₆ alkyl;
- (ii) C₃₋₇ cycloalkyl or C₄₋₁₀ alkylcycloalkyl, both optionally substituted with hydroxy, carboxyl, (C₁₋₆ alkoxy)carbonyl, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C₁₋₆ alkyl;
- (iv) C₆ or C₁₀ aryl or C₇₋₁₆ aralkyl, all optionally substituted with C₁₋₆ alkyl, hydroxy, amido, (lower alkyl)amide, or amino optionally substituted with C₁₋₆ alkyl;
- (v) Het or (lower alkyl)-Het, both optionally substituted with C₁₋₆ alkyl, hydroxy, amino optionally substituted with C₁₋₆ alkyl, amido, (lower alkyl)amide, or amino optionally substituted with C₁₋₆ alkyl.

5. A compound of formula I according to claim 1, wherein **B** is a carboxyl of formula R₄-O-C(O)-, wherein R₄ is

- (i) C₁₋₁₀ alkyl optionally substituted with carboxyl, C₁₋₆ alkanoyl, hydroxy, C₁₋₆ alkoxy, amino optionally mono- or di-substituted with C₁₋₆ alkyl, amido or (lower alkyl)amide;
- (ii) C₃₋₇ cycloalkyl, C₄₋₁₀ alkylcycloalkyl, all optionally substituted with carboxyl, (C₁₋₆ alkoxy)carbonyl, amino optionally mono- or di-substituted with C₁₋₆ alkyl, amido or (lower alkyl)amide;
- (iv) C₆ or C₁₀ aryl or C₇₋₁₆ aralkyl optionally substituted with C₁₋₆ alkyl, hydroxy, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C₁₋₆ alkyl; or
- (v) Het or (lower alkyl)-Het, both optionally substituted with C₁₋₆ alkyl, hydroxy, amino optionally mono- or di-substituted with C₁₋₆ alkyl, amido or (lower alkyl)amido.

6. A compound of formula I according to claim 1, wherein **B** is an amide of formula R₄-N(R₅)-C(O)- wherein R₄ is

- (i) C₁₋₁₀ alkyl optionally substituted with carboxyl, C₁₋₆ alkanoyl, hydroxy, C₁₋₆ alkoxy, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C₁₋₆ alkyl;

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- (ii) C₃₋₇ cycloalkyl or C₄₋₁₀ alkylcycloalkyl, all optionally substituted with carboxyl, (C₁₋₆ alkoxy)carbonyl, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C₁₋₆ alkyl;
 - (iii) amino optionally mono- or di-substituted with C₁₋₃ alkyl;
 - (iv) C₆ or C₁₀ aryl or C₇₋₁₆ aralkyl, all optionally substituted with C₁₋₆ alkyl, hydroxy, amido, (lower alkyl)amide, or amino optionally substituted with C₁₋₆ alkyl; or
 - (v) Het or (lower alkyl)-Het, both optionally substituted with C₁₋₆ alkyl, hydroxy, amino optionally substituted with C₁₋₆ alkyl, amido or (lower alkyl)amide; and
- R₅ is H or methyl.

7. A compound of formula I according to claim 1, wherein B is a thioamide of formula R₄-NH-C(S)-; wherein R₄ is
- (i) C₁₋₁₀ alkyl optionally substituted with carboxyl, C₁₋₆ alkanoyl or C₁₋₆ alkoxy;
 - (ii) C₃₋₇ cycloalkyl or C₄₋₁₀ alkylcycloalkyl, all optionally substituted with carboxyl, (C₁₋₆ alkoxy)carbonyl, amino or amido.
8. A compound of formula I according to claim 2, wherein B is a C₆ or C₁₀ aryl optionally substituted with C₁₋₆ alkyl, C₁₋₆ alkoxy, C₁₋₆ alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C₁₋₆ alkyl.
9. A compound of formula I according to claim 2, wherein B is Het optionally substituted with C₁₋₆ alkyl, C₁₋₆ alkoxy, C₁₋₆ alkanoyl, hydroxy, halo, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C₁₋₆ alkyl.
10. A compound of formula I according to claim 4, wherein B is an acyl derivative of formula R₄-C(O)- wherein R₄ is
- (i) C₁₋₁₀ alkyl optionally substituted with carboxyl, hydroxy or C₁₋₆ alkoxy; or
 - (ii) C₃₋₇ cycloalkyl or C₄₋₁₀ alkylcycloalkyl, both optionally substituted with hydroxy, carboxyl, (C₁₋₆ alkoxy)carbonyl, or
 - (iv) C₆ or C₁₀ aryl or C₇₋₁₆ aralkyl, all optionally substituted with C₁₋₆ alkyl, hydroxy, or (v) Het optionally substituted with C₁₋₆ alkyl, hydroxy, amido or amino.
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11. A compound of formula I according to claim 5, wherein B is a carboxyl of formula R₄-O-C(O)-, wherein R₄ is
- (i) C₁₋₁₀ alkyl optionally substituted with carboxyl, C₁₋₆ alkanoyl, hydroxy, C₁₋₆

alkoxy or amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C₁₋₆ alkyl;

(ii) C₃₋₇ cycloalkyl, C₄₋₁₀ alkylcycloalkyl, all optionally substituted with carboxyl, (C₁₋₆ alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C₁₋₆ alkyl, or

(iv) C₆ or C₁₀ aryl or C₇₋₁₆ aralkyl, all optionally substituted with C₁₋₆ alkyl, hydroxy, amino optionally substituted with C₁₋₆ alkyl; or

(v) Het or (lower alkyl)-Het, both optionally substituted with C₁₋₆ alkyl, hydroxy, amido, or amino optionally mono-substituted with C₁₋₆ alkyl.

12. A compound of formula I according to claim 6, wherein **B** is an amide of formula R₄-N(R₅)-C(O)- wherein R₄ is

(i) C₁₋₁₀ alkyl optionally substituted with carboxyl, C₁₋₆ alkanoyl, hydroxy, C₁₋₆ alkoxy, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C₁₋₆ alkyl;

(ii) C₃₋₇ cycloalkyl or C₄₋₁₀ alkylcycloalkyl, all optionally substituted with carboxyl, (C₁₋₆ alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C₁₋₆ alkyl;

(iii) amino optionally mono- or di-substituted with C₁₋₃ alkyl, or

(iv) C₆ or C₁₀ aryl or C₇₋₁₆ aralkyl, all optionally substituted with C₁₋₆ alkyl, hydroxy, amino or amido optionally substituted with C₁₋₆ alkyl; or

(v) Het optionally substituted with C₁₋₆ alkyl, hydroxy, amino or amido,

and R₅ is H.

13. A compound of formula I according to claim 7, wherein **B** is a thioamide of formula R₄-NH-C(S)-; wherein R₄ is (i) C₁₋₁₀ alkyl; or (ii) C₃₋₇ cycloalkyl.

14. A compound of formula I according to claim 12, wherein **B** is an amide of formula R₄-NH-C(O)- wherein R₄ is

(i) C₁₋₁₀ alkyl optionally substituted with carboxyl, C₁₋₆ alkanoyl, hydroxy, C₁₋₆ alkoxy amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C₁₋₆ alkyl;

(ii) C₃₋₇ cycloalkyl or C₄₋₁₀ alkylcycloalkyl, all optionally substituted with carboxyl, (C₁₋₆ alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C₁₋₆ alkyl;

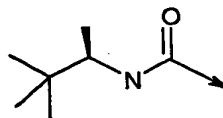
(iv) C₆ or C₁₀ aryl or C₇₋₁₆ aralkyl optionally substituted with C₁₋₆ alkyl, hydroxy, amino or amido.

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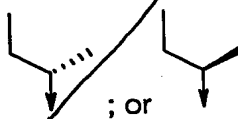
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15. A compound of formula I according to claim 1, wherein B is

tert-butoxycarbonyl (Boc) or



16. A compound of formula I according to claim 1, wherein Y is H or methyl.
 17. A compound of formula I according to claim 16, wherein Y is H.
 18. A compound of formula I according to claim 1, wherein R³ is C₁₋₈ alkyl, C₃₋₇ cycloalkyl, or C₄₋₁₀ alkylcycloalkyl, all optionally substituted with hydroxy, C₁₋₆ alkoxy, C₁₋₆ thioalkyl, acetamido, C₆ or C₁₀ aryl, or C₇₋₁₆ aralkyl.
 19. A compound of formula I according to claim 18, wherein R³ is the side chain of *tert*-butylglycine (Tbg), Ile, Val, Chg or:



20. A compound of formula I according to claim 19, wherein R³ is the side chain of Tbg, Chg or Val.
 21. A compound of formula I according to claim 1, wherein R₂ is S-R₂₀ or O-R₂₀ wherein R₂₀ is a C₆ or C₁₀ aryl, C₇₋₁₆ aralkyl, Het or -CH₂-Het, all optionally mono-, di- or tri-substituted with R₂₁, wherein

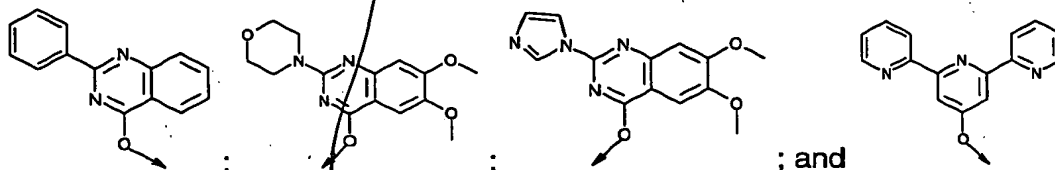
R₂₁ is C₁₋₆ alkyl; C₁₋₆ alkoxy; lower thioalkyl; amino or amido optionally mono- or di-substituted with C₁₋₆ alkyl, C₆ or C₁₀ aryl, C₇₋₁₆ aralkyl, Het or (lower alkyl)-Het; NO₂; OH; halo; trifluoromethyl; carboxyl; C₆ or C₁₀ aryl, C₇₋₁₆ aralkyl, or Het, said aryl, aralkyl or Het being optionally substituted with R₂₂, wherein

R₂₂ is C₁₋₆ alkyl; C₃₋₇ cycloalkyl; C₁₋₆ alkoxy; amino; mono- or di-(lower alkyl)amino; (lower alkyl)amide; sulfonylalkyl; NO₂; OH; halo; trifluoromethyl; carboxyl or Het.

22. A compound of formula I according to claim 21, wherein R₂₁ is C₁₋₆ alkyl; C₁₋₆ alkoxy; amino; di(lower alkyl)amino; (lower alkyl)amide; C₆ or C₁₀ aryl, or Het, said aryl or Het being optionally substituted with R₂₂, wherein R₂₂ is C₁₋₆ alkyl; C₃₋₇ cycloalkyl; C₁₋₆ alkoxy; amino; mono- or di(lower alkyl)amino; amido; (lower alkyl)amide; halo; trifluoromethyl or Het.
 23. A compound of formula I according to claim 22, wherein R₂₂ is C₁₋₆ alkyl; C₁₋₆ alkoxy; halo; amino optionally mono- or di-substituted with lower alkyl; amido; (lower alkyl)amide; or Het.

24. A compound of formula I according to claim 23, wherein R_{22} is methyl; ethyl; isopropyl; tert-butyl; methoxy; chloro; amino optionally mono- or di-substituted with lower alkyl; amido, (lower alkyl)amide; or (lower alkyl) 2-thiazole.

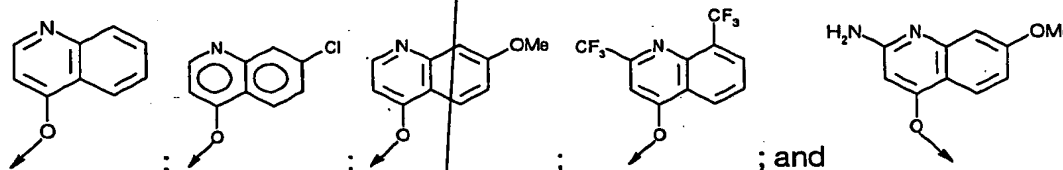
25. A compound of formula I according to claim 21, wherein R_2 is selected from the group consisting of:



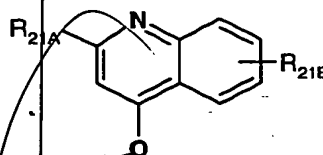
26. A compound of formula I according to claim 21, wherein R_2 is 1-naphthylmethoxy; 2-naphthylmethoxy; benzyloxy, 1-naphthylloxy; 2-naphthylloxy; or quinolinoloxo unsubstituted, mono- or di-substituted with R_{21} as defined in claim 21.

27. A compound of formula I according to claim 26, wherein R_2 is 1-naphthylmethoxy; or quinolinoloxo unsubstituted, mono- or di-substituted with R_{21} as defined in claim 26.

28. A compound of formula I according to claim 27, wherein R_2 is selected from the group consisting of:



29. A compound of formula I according to claim 26, wherein R_2 is :



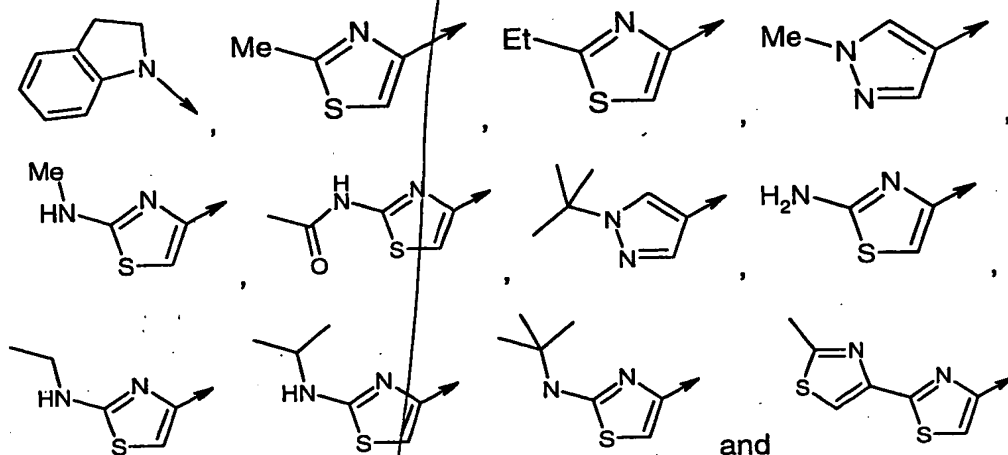
wherein R_{21A} is C_{1-6} alkyl; C_{1-6} alkoxy; lower thioalkyl; halo; amino optionally mono-substituted with C_{1-6} alkyl; or C_6 , C_{10} aryl, C_{7-16} aralkyl, or Het, said aryl, aralkyl or Het optionally substituted with R_{22} wherein R_{22} is C_{1-6} alkyl, C_{1-6} alkoxy, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl, or Het; and

R_{21B} is C_{1-6} alkyl, C_{1-6} alkoxy, amino, di(lower alkyl)amino, (lower alkyl)amide, NO_2 , OH, halo, trifluoromethyl, or carboxyl.

30. A compound of formula I according to claim 29, wherein R_{21A} is C_6 , C_{10} aryl or Het, all optionally substituted with R_{22} as defined in claim 30.

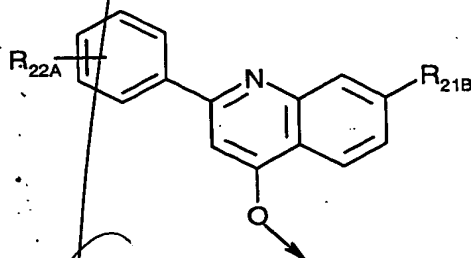
31. A compound of formula I according to claim 30, wherein R_{21A} is selected from the

group consisting of:



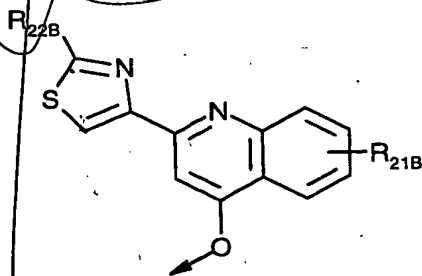
and

32. A compound of formula I according to claim 29, wherein R_2 is:



wherein R_{22A} is C_{1-6} alkyl, C_{1-6} alkoxy; or halo; and R_{21B} is C_{1-6} alkyl, C_{1-6} alkoxy, amino, di(lower alkyl)amino, (lower alkyl)amide, NO_2 , OH, halo, trifluoromethyl, or carboxyl.

33. A compound of formula I according to claim 29, wherein R_2 is:



wherein R_{22B} is C_{1-6} alkyl, amino optionally mono-substituted with C_{1-6} alkyl, amido, or (lower alkyl)amide; ; and R_{21B} is C_{1-6} alkyl, C_{1-6} alkoxy, amino, di(lower alkyl)amino, (lower alkyl)amide, NO_2 , OH, halo, trifluoromethyl, or carboxyl.

34. A compound of formula I according to claim 32 or 33, wherein R_{21B} is C_{1-6} alkoxy, or di(lower alkyl)amino.
35. A compound of formula I according to claim 32 or 33, wherein R_{21B} is methoxy.
36. A compound of formula I according to claim 1, wherein $P1$ is a cyclobutyl or

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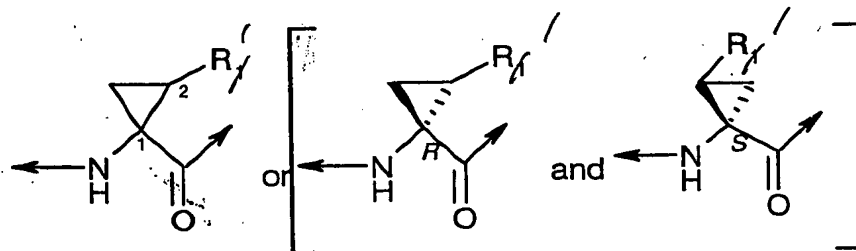
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cyclopropyl ring, both optionally substituted with R_1 , wherein R_1 is H, C_{1-3} alkyl, C_{3-5} cycloalkyl, or C_{2-4} alkenyl, all optionally substituted with halo.

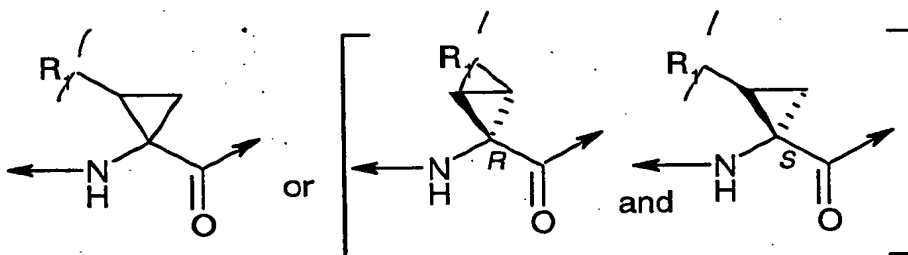
37. A compound of formula I according to claim 36, wherein P_1 is cyclopropyl and R^1 is ethyl, vinyl, cyclopropyl, 1 or 2-bromoethyl or 1 or 2-bromovinyl.

- 28 38. A compound of formula I according to claim 37, wherein R_1 is vinyl.

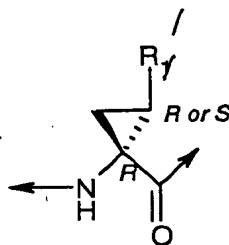
- 29 39. A compound of formula I according to claim 37, wherein R_1 at carbon 2 is orientated *syn* to the carbonyl at position 1, represented by the radical:



40. A compound of formula I according to claim 37, wherein R_1 at position 2 is orientated *anti* to the carbonyl at position 1, represented by the radical:

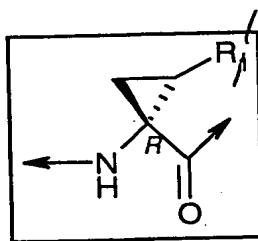


41. A compound of formula I according to claim 37, wherein carbon 1 has the *R* configuration:



42. An optical isomer of a compound of formula I according to claim 41, wherein said R_1 substituent and the carbonyl in a *syn* orientation in the following absolute configuration:

126



43. A compound of formula I according to claim 42, wherein R_1 is ethyl, hence the asymmetric carbon atoms at positions 1 and 2 have the R,R configuration.

44. A compound of formula I according to claim 42, wherein R_1 is vinyl, hence the asymmetric carbon atoms at positions 1 and 2 have the R,S configuration.

45.

A compound of formula I according to claim 1, wherein

B is a C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amido, or amino optionally substituted with C_{1-6} alkyl; or Het or (lower alkyl)-Het, all optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amido, or amino optionally substituted with C_{1-6} alkyl, or

B is R_4-SO_2 wherein R_4 is preferably amido; (lower alkyl)amide; C_6 or C_{10} aryl, C_{7-14} aralkyl or Het, all optionally substituted with C_{1-6} alkyl, or

B is an acyl derivative of formula $R_4-C(O)-$ wherein R_4 is

- (i) C_{1-10} alkyl optionally substituted with carboxyl, hydroxy or C_{1-6} alkoxy, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl;
- (ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, both optionally substituted with hydroxy, carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl;
- (iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amido, (lower alkyl)amide, or amino optionally substituted with C_{1-6} alkyl;
- (v) Het or (lower alkyl)-Het, both optionally substituted with C_{1-6} alkyl, hydroxy, amino optionally substituted with C_{1-6} alkyl, amido, (lower alkyl)amide, or amino optionally substituted with C_{1-6} alkyl, or

B is a carboxyl of formula $R_4-O-C(O)-$, wherein R_4 is

- (i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy, amino optionally mono- or di-substituted with C_{1-6} alkyl, amido or (lower alkyl)amide;

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127

- (ii) C₃₋₇ cycloalkyl, C₄₋₁₀ alkylcycloalkyl, all optionally substituted with carboxyl, (C₁₋₆ alkoxy)carbonyl, amino optionally mono- or di-substituted with C₁₋₆ alkyl, amido or (lower alkyl)amide;
- (iv) C₆ or C₁₀ aryl or C₇₋₁₆ aralkyl optionally substituted with C₁₋₆ alkyl, hydroxy, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C₁₋₆ alkyl; or
- (v) Het or (lower alkyl)-Het, both optionally substituted with C₁₋₆ alkyl, hydroxy, amino optionally mono- or di-substituted with C₁₋₆ alkyl, amido or (lower alkyl)amido, or

B is an amide of formula R₄-N(R₅)-C(O)- wherein R₄ is

- (i) C₁₋₁₀ alkyl optionally substituted with carboxyl, C₁₋₆ alkanoyl, hydroxy, C₁₋₆ alkoxy, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C₁₋₆ alkyl;
- (ii) C₃₋₇ cycloalkyl or C₄₋₁₀ alkylcycloalkyl, all optionally substituted with carboxyl, (C₁₋₆ alkoxy)carbonyl, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C₁₋₆ alkyl;
- (iii) amino optionally mono- or di-substituted with C₁₋₃ alkyl;
- (iv) C₆ or C₁₀ aryl or C₇₋₁₆ aralkyl, all optionally substituted with C₁₋₆ alkyl, hydroxy, amido, (lower alkyl)amide, or amino optionally substituted with C₁₋₆ alkyl; or
- (v) Het or (lower alkyl)-Het, both optionally substituted with C₁₋₆ alkyl, hydroxy, amino optionally substituted with C₁₋₆ alkyl, amido or (lower alkyl)amide; and

R₅ is H or methyl, or

B is thioamide of formula R₄-NH-C(S)-; wherein R₄ is

- (i) C₁₋₁₀ alkyl optionally substituted with carboxyl, C₁₋₆ alkanoyl or C₁₋₆ alkoxy;
- (ii) C₃₋₇ cycloalkyl or C₄₋₁₀ alkylcycloalkyl, all optionally substituted with carboxyl, (C₁₋₆ alkoxy)carbonyl, amino or amido;

Y is H or methyl;

R³ is C₁₋₆ alkyl, C₃₋₇ cycloalkyl, or C₄₋₁₀ alkylcycloalkyl, all optionally substituted with hydroxy, C₁₋₆ alkoxy, C₁₋₆ thioalkyl, acetamido, C₆ or C₁₀ aryl, or C₇₋₁₆ aralkyl;

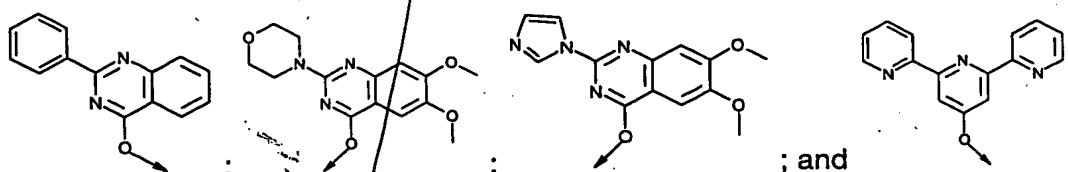
R₂ is S-R₂₀ or O-R₂₀ wherein R₂₀ is preferably a C₆ or C₁₀ aryl, C₇₋₁₆ aralkyl, Het or -CH₂-Het, all optionally mono-, di- or tri-substituted with R₂₁, wherein

R₂₁ is C₁₋₆ alkyl, C₁₋₆ alkoxy; lower thioalkyl; amino or amido optionally mono-

or di-substituted with C_{1-6} alkyl, C_6 or C_{10} aryl, C_{7-16} aralkyl, Het or (lower alkyl)-Het; NO_2 ; OH; halo; trifluoromethyl; carboxyl; C_6 or C_{10} aryl, C_{7-16} aralkyl, or Het, said aryl, aralkyl or Het being optionally substituted with R_{22} , wherein

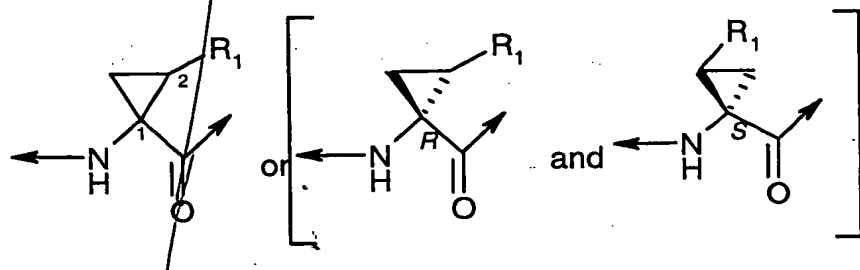
R_{22} is C_{1-6} alkyl; C_{3-7} cycloalkyl; C_{1-6} alkoxy; amino; mono- or di-(lower alkyl)amino; (lower alkyl)amide; sulfonylalkyl; NO_2 ; OH; halo; trifluoromethyl; carboxyl or Het; or

R_2 is selected from the group consisting of:



or R_2 is 1-naphthylmethoxy; 2-naphthylmethoxy; benzyloxy, 1-naphthyloxy; 2-naphthyloxy; or quinolinoxy unsubstituted, mono- or di-substituted with R_{21} as defined above; and

the **P1** segment is a cyclopropyl ring, both optionally substituted with R_1 , wherein R_1 is C_{1-3} alkyl, C_{3-5} cycloalkyl, or C_{2-4} alkenyl optionally substituted with halo, and said R_1 at carbon 2 is orientated *syn* to the carbonyl at position 1, represented by the radical:



or a pharmaceutically acceptable salt or ester thereof.

46. A compound of formula I according to claim 45, wherein **B** is a C_6 or C_{10} aryl optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl; or **B** is Het optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, halo, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl; or **B** is R_4-SO_2 wherein R_4 is C_6 or C_{10} aryl, a C_{7-14} aralkyl or Het all optionally substituted with C_{1-6} alkyl; amido, (lower alkyl)amide; **B** is an acyl derivative of

formula $R_4-C(O)-$ wherein R_4 is

- (i) C_{1-10} alkyl optionally substituted with carboxyl, hydroxy or C_{1-6} alkoxy; or
- (ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, both optionally substituted with hydroxy, carboxyl, (C_{1-6} alkoxy)carbonyl; or
- (iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy; or
- (v) Het optionally substituted with C_{1-6} alkyl, hydroxy, amido or amino;

or **B** is a carboxyl of formula $R_4-O-C(O)-$, wherein R_4 is

- (i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy or amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl;
- (ii) C_{3-7} cycloalkyl, C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl; or
- (iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amino optionally substituted with C_{1-6} alkyl; or
- (v) Het or (lower alkyl)-Het, both optionally substituted with C_{1-6} alkyl, hydroxy, amido, or amino optionally mono-substituted with C_{1-6} alkyl;

or **B** is an amide of formula $R_4-N(R_5)-C(O)-$ wherein R_4 is

- (i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl;
- (ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl; and R_5 is H or methyl; or
- R_4 is (iii) amino optionally mono- or di-substituted with C_{1-3} alkyl; or
- (iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amino or amido optionally substituted with C_{1-6} alkyl; or
- (v) Het optionally substituted with C_{1-6} alkyl, hydroxy, amino or amido; or


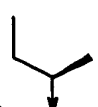
B is a thioamide of formula $R_4-NH-C(S)-$; wherein R_4 is:

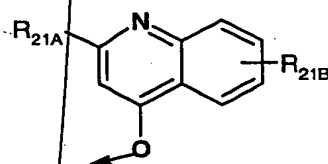
- (i) C_{1-10} alkyl; or (ii) C_{3-7} cycloalkyl; or

Y is H;

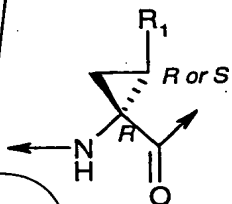
R^3 is the side chain of *tert*-butylglycine (Tbg), Ile, Val, Chg or:

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; or ;
R₂ is 1-naphthylmethoxy; or quinolinoxyl unsubstituted, mono- or di-substituted with **R₂₁** as defined above, or
R₂ is :



wherein **R_{21A}** is C₁₋₆ alkyl; C₁₋₆ alkoxy; C₆, C₁₀ aryl or Het; lower thioalkyl; halo; amino optionally mono-substituted with C₁₋₆ alkyl; or C₆, C₁₀ aryl, C₇₋₁₆ aralkyl or Het, optionally substituted with **R₂₂** wherein **R₂₂** is C₁₋₆ alkyl, C₁₋₆ alkoxy, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C₁₋₆ alkyl, or Het;
P1 is a cyclopropyl ring wherein carbon 1 has the *R* configuration,



; and

R¹ is ethyl, vinyl, cyclopropyl, 1 or 2-bromoethyl or 1 or 2-bromovinyl.

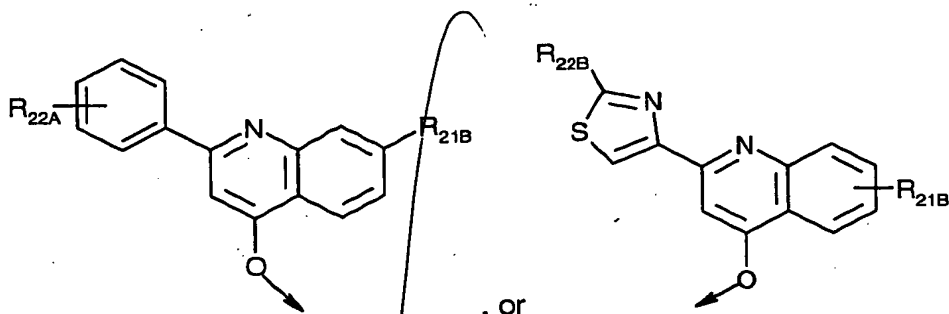
47. A compound of formula I according to claim 46, wherein

B is an amide of formula **R₄-NH-C(O)-** wherein **R₄** is

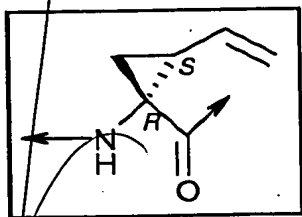
- i) C₁₋₁₀ alkyl optionally substituted with carboxyl, C₁₋₆ alkanoyl, hydroxy, C₁₋₆ alkoxy amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C₁₋₆ alkyl;
- (ii) C₃₋₇ cycloalkyl or C₄₋₁₀ alkylcycloalkyl, all optionally substituted with carboxyl, (C₁₋₆ alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C₁₋₆ alkyl;
- (iv) C₆ or C₁₀ aryl or C₇₋₁₆ aralkyl optionally substituted with C₁₋₆ alkyl, hydroxy, amino or amido;

R³ is the side chain of Tbg, Chg or Val;

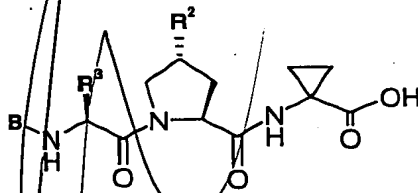
R₂ is:



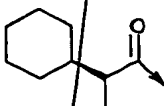
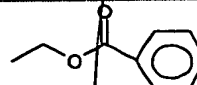
wherein R_{22A} is C_{1-6} alkyl (such as methyl); C_{1-6} alkoxy (such as methoxy); or halo (such as chloro); R_{22B} is C_{1-6} alkyl, amino optionally mono-substituted with C_{1-6} alkyl, amido, or (lower alkyl)amide; and R_{21B} is C_{1-6} alkyl, C_{1-6} alkoxy, amino, di(lower alkyl)amino, (lower alkyl)amide, NO_2 , OH, halo, trifluoromethyl, or carboxyl; and **P1** is:

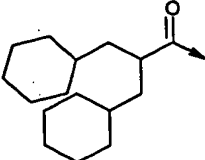
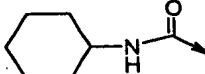
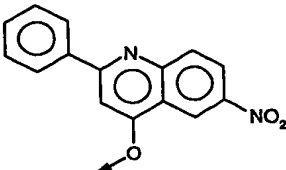
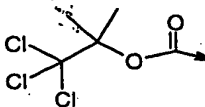
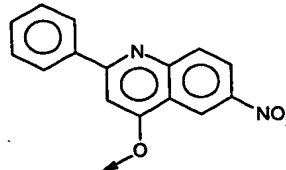
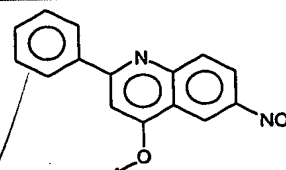
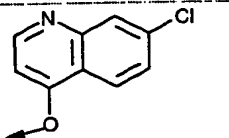
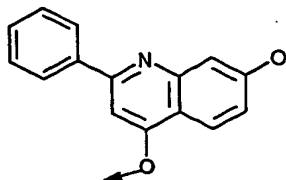


48. A compound according to claim 45 represented by the formula:



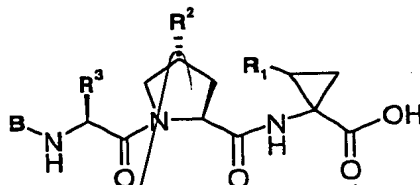
wherein **B**, R_3 , R_2 are as defined below:

Tab 1 Cpd#	B	R_3	R_2
101	Boc	cHex	-O-CH ₂ -1-naphthyl ;
102		cHex	-O-CH ₂ -1-naphthyl ;
103		cHex	-O-CH ₂ -1-naphthyl ;

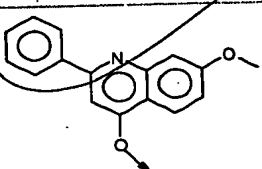
Tab 1 Cpd#	B	R ₃	R ₂
104		cHex	-O-CH ₂ -1-naphthyl
105		cHex	-O-CH ₂ -1-naphthyl
106	Boc	cHex	
107		cHex	-O-CH ₂ -1-naphthyl
108	Boc	iPr	
109	acetyl	cHex	
110	Boc	i-Pr	
and 111	Boc	t-Bu	

49. Compound # 111 according to claim 48.

50. A compound according to claim 45 represented by the formula:

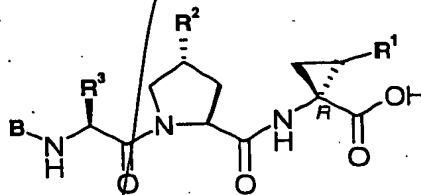


wherein B, R₃, R₂, R₁ are as defined below:

Table 2 Cpd #	B	R ₃	R ₂	R ₁ anti to carboxy
201	Boc	cyclohexyl	-O-CH ₂ -1-naphthyl	ethyl (one isomer)
202	Boc	cyclohexyl	-O-CH ₂ -1-naphthyl	ethyl (other isomer)
and 203	Boc	t-Bu		vinyl 1R, 2R

51. Compound #203 according to claim 49.

52. A compound according to claim 45 represented by the formula:



wherein B, R₃, R₂ and R₁ are as defined below:



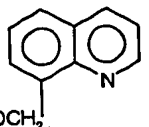
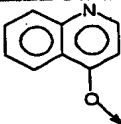
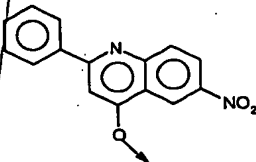
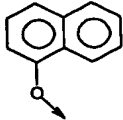
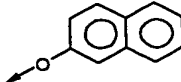
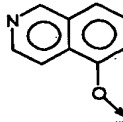
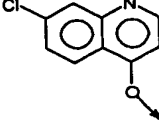
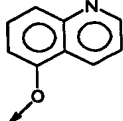
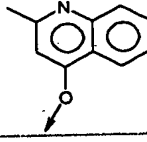
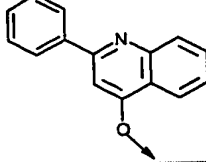
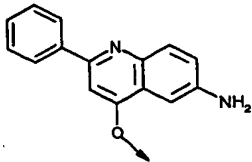
Table 3 Cpd #	B	R ₃	R ₂	R ₁ syn to carboxyl
301	Boc	cHex	-O-CH ₂ -1-naphthyl	ethyl
302		iPr	-O-CH ₂ -1-naphthyl	ethyl
303		cHex	-O-CH ₂ -1-naphthyl	ethyl
304	Boc	cHex		ethyl
305	Boc	cHex	-O-CH ₂ -1-naphthyl	vinyl

Table 3 Cpd #	B	R ₃	R ₂	R ₁ syn to carboxyl vinyl
306	Boc	cHex		vinyl ;
307	Boc	cHex		vinyl ;
308	Boc	cHex		vinyl ;
309	Boc	cHex		vinyl ;
310	Boc	cHex		vinyl ;
311	Boc	cHex		vinyl ;
312	Boc	cHex		vinyl ;
313	Boc	cHex		vinyl ;
314	Boc	cHex		vinyl ;
315	Boc	cHex		vinyl ;

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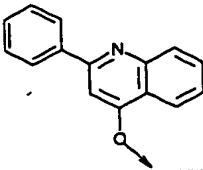
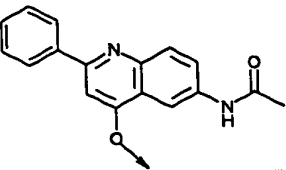
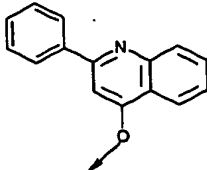
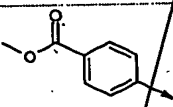
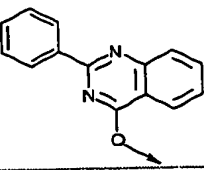
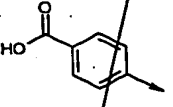
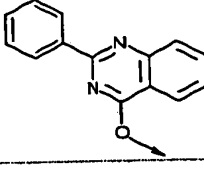
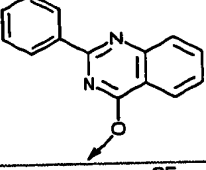
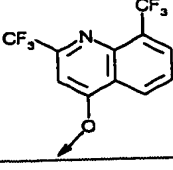
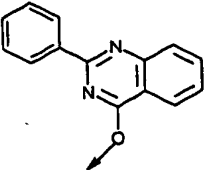

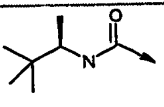
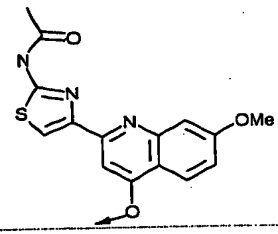
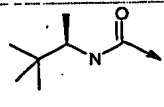
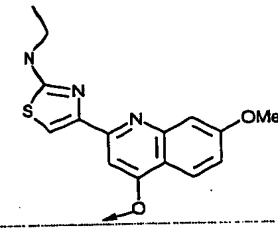
Table 3 Cpd #	B	R ₃	R ₂	R ₁ syn to carboxyl	
316	Acetyl	cHex		vinyl	;
317	Boc	cHex		vinyl	;
318	CF ₃ -C(O)-	<i>i</i> -Pr		vinyl	;
319		cHex		vinyl	;
320		cHex		vinyl	;
321	Boc	<i>t</i> -Bu		vinyl	;
322	Boc	<i>t</i> -Bu		vinyl	;
323	Boc	<i>t</i> -Bu			;

Table 3 Cpd #	B	R ₃	R ₂	R ₁ syn to carboxyl
324	Boc	<i>t</i> -Bu		vinyl ;
325	Boc	<i>t</i> -Bu		;
326	Boc	<i>t</i> -Bu		vinyl ;
327		<i>t</i> -Bu		vinyl ;
328	Boc	<i>t</i> -Bu		vinyl ;
329	Boc	<i>t</i> -Bu		vinyl ;
330	Boc	<i>t</i> -Bu		vinyl ;
331		<i>t</i> -Bu		vinyl ;
332	Boc	<i>t</i> -Bu		ethyl ;

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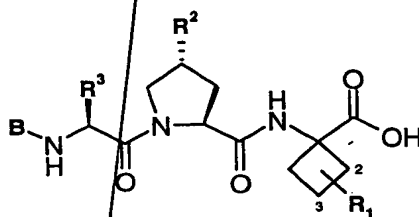
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Table 3 Cpd #	B	R ₃	R ₂	R ₁ syn to carboxyl
333		<i>t</i> -Bu		vinyl ;
and 334		<i>t</i> -Bu		vinyl

53. A compound according to claim 52, selected from the group consisting of compound #: 307, 314, 317, 319, 321, 324, 325, 326, 327, 329, 331, 332, 333, and 334.

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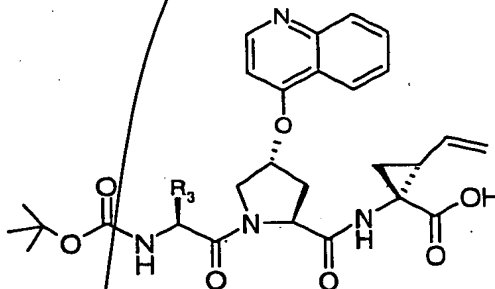
54. A compound according to claim 45 represented by the formula:



wherein B, R₃, R₂ and R₁ are as defined below:

Table 4 Cpd #	B	R ₃	R ₂	R ₁
401	Boc	<i>i</i> -Pr		H ;
402	Boc	<i>t</i> -Bu		H ;
403	Boc	<i>t</i> -Bu		H ;
404	Boc	<i>t</i> -Bu		3-(=CH ₂) ;
405	Boc	<i>t</i> -Bu		2-vinyl ;
and 406	Boc	<i>t</i> -Bu		2-Et .

55. A compound according to claim 54, selected from the group consisting of compound #: 403, 405, and 406.
56. A compound according to claim 45 represented by the formula:



wherein R_3 is as defined below:

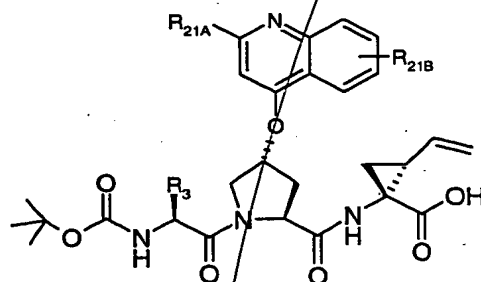
Table 5 Cpd #	R_3
501	<i>t</i> -Bu
502	H
503	
504	
505	
506	

Table 5 Cpd #	R_3
507	
508	
509	
510	
and 511	

57. A compound according to claim 56, selected from the group consisting of compound #: 501, 509, and 510.
58. A compound according to claim 46 represented by the formula:

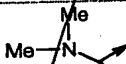
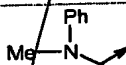
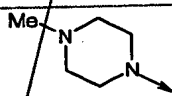
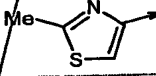

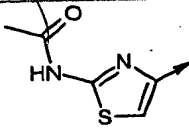
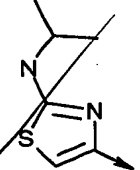
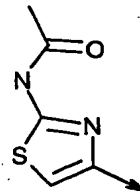
006260" 86552960

142

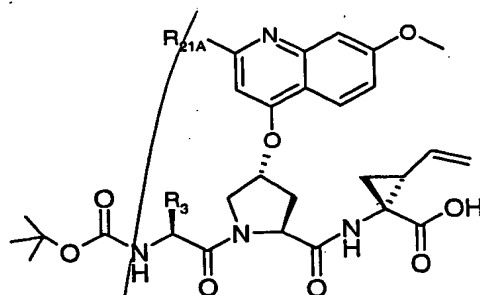


wherein R_3 , R_{21A} and R_{21B} are as defined below:

Table 6 Cpd #	R_3	R_{21A}	R_{21B}	
601	<i>i</i> -Pr	Ph	7-OMe	;
602	<i>t</i> -Bu	Ph	8-OMe, 7-OMe	;
603	<i>i</i> -Pr	Ph	7-ethyl	;
604	<i>t</i> -Bu	--	7-OMe	;
605	<i>t</i> -Bu	Ph	7-O- <i>i</i> Pr	;
606	<i>t</i> -Bu	--	7-Cl	;
607	<i>i</i> Pr	--	7-Cl	;
608	CH ₂ - <i>i</i> Pr	--	7-Cl	;
609	<i>t</i> -Bu		--	;
610	<i>t</i> -Bu	Cl	--	;
611	<i>t</i> -Bu	Ph	7-N(Me) ₂	;
612	<i>t</i> -Bu		--	;
613	<i>t</i> -Bu		--	;
614	<i>t</i> -Bu		--	;
615	<i>t</i> -Bu	--	7-N(Me) ₂	;
616	<i>t</i> -Bu		--	;
617	<i>t</i> -Bu		--	;

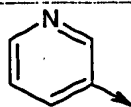
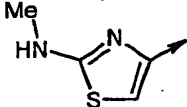
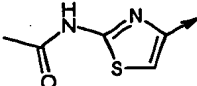
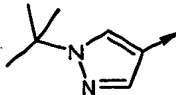
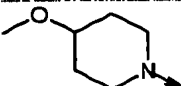
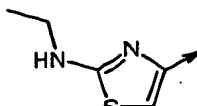
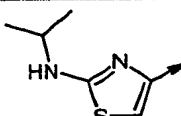
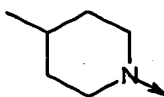
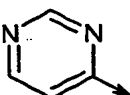
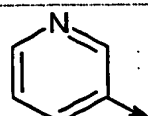
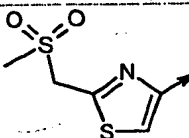
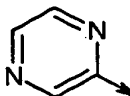
Table 6 Cpd #	R ₃	R _{21A}	R _{21B}
618	<i>t</i> -Bu		--
619	<i>t</i> -Bu		--
620	<i>t</i> -Bu		--
621	<i>t</i> -Bu		--
622	<i>t</i> -Bu		--
623	<i>t</i> -Bu	MeO-	--
624	<i>t</i> -Bu	(Me) ₂ N-	--
625	<i>t</i> -Bu	Ph	7-S(Me)
626	<i>t</i> -Bu	Ph	7-Br
627	<i>t</i> -Bu	Ph	7-F
628	<i>t</i> -Bu		7-N(Me) ₂
629	<i>t</i> -Bu		7-N(Me) ₂
and 630	<i>t</i> -Bu		7-N(Et) ₂

59. A compound according to claim 58, selected from the group consisting of compound #: 601, 602, 603, 604, 605, 606, 607, 610, 611, 612, 615, 616, 617, 620, 621, 622, 625, 626, 627, 628, 629, and 630.
60. A compound according to claim 46 represented by the formula:

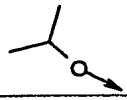
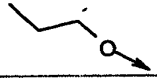
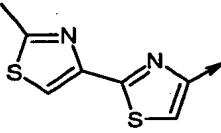
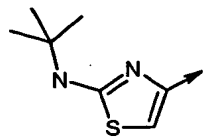
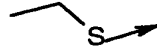
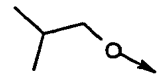


wherein R_3 and R_{21A} are as defined below:

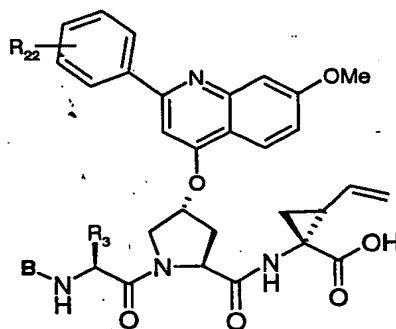
Table 7 Cpd #	R_3	R_{21A}
701	<i>t</i> -Bu	
702	<i>t</i> -Bu	
703	<i>t</i> -Bu	
704	<i>t</i> -Bu	
705	<i>t</i> -Bu	
706	<i>t</i> -Bu	
707	<i>t</i> -Bu	
708	<i>t</i> -Bu	Ph-N(Me)-
709	<i>t</i> -Bu	
710	<i>t</i> -Bu	HOOC-
711	<i>t</i> -Bu	
712	<i>t</i> -Bu	(Me) ₂ N-
713	<i>t</i> -Bu	
714	<i>t</i> -Bu	
715	<i>t</i> -Bu	

Table 7 Cpd #	R ₃	R _{21A}	
716	<i>t</i> -Bu		;
717	<i>t</i> -Bu		;
718	<i>t</i> -Bu	NH ₂	;
719	<i>t</i> -Bu		;
720	<i>t</i> -Bu		;
721	<i>t</i> -Bu		;
722	<i>t</i> -Bu		;
723	<i>t</i> -Bu		;
724	<i>t</i> -Bu		;
725	<i>t</i> -Bu		;
726	<i>t</i> -Bu	<i>i</i> -Pr	;
727	<i>t</i> -Bu		;
728	<i>t</i> -Bu		;
729	<i>t</i> -Bu		;

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Table 7 Cpd #	R ₃	R _{21A}
730	<i>t</i> -Bu	
731	<i>t</i> -Bu	
732	<i>t</i> -Bu	
733	<i>t</i> -Bu	
734	<i>t</i> -Bu	
735	<i>t</i> -Bu	
736	<i>t</i> -Bu	<i>t</i> -Bu
and 737	<i>t</i> -Bu	CHex

61. A compound according to claim 60, selected from the group consisting of compound #: 701, 702, 703, 704, 705, 706, 707, 708, 709, and 711 to 737.
62. A compound according to claim 45 represented by the formula:



wherein B, R₃, and R₂₂ are as defined below:

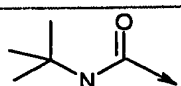
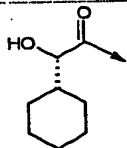
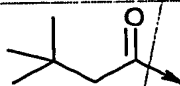
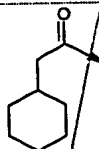
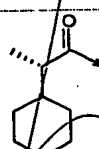
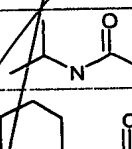
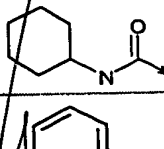
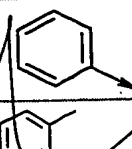
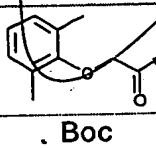
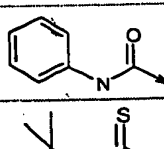
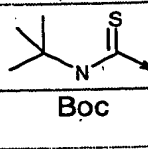
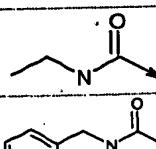
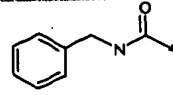
Table 8 Cpd #	B	R ₃	R ₂₂
801		<i>t</i> -Bu	--

Table 8 Cpd #	B	R ₃	R ₂₂
802		<i>t</i> -Bu	--
803		<i>t</i> -Bu	--
804		<i>t</i> -Bu	--
805	Ac	<i>t</i> -Bu	--
806		<i>t</i> -Bu	--
807		<i>t</i> -Bu	--
808		<i>t</i> -Bu	--
809		<i>i</i> -Pr	--
810		<i>t</i> -Bu	--
811	Boc	<i>t</i> -Bu	4-Cl
812		<i>t</i> -Bu	--
813		<i>t</i> -Bu	--
814	Boc	<i>t</i> -Bu	2-Cl
815	Boc	<i>t</i> -Bu	3-Cl
816		<i>t</i> -Bu	--
817		<i>t</i> -Bu	--

006260-86E5/960

006260" 8652960

148

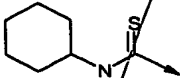
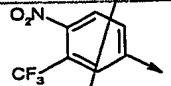
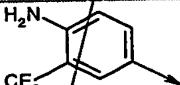
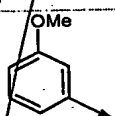
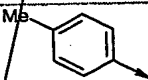
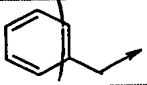
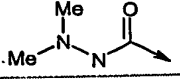
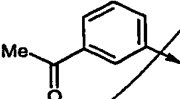
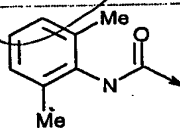

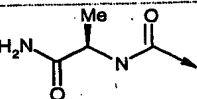
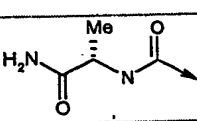
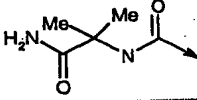
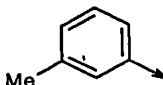
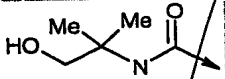
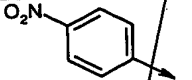
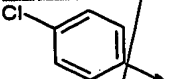
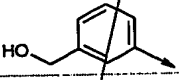
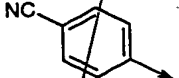
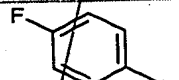

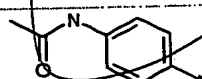
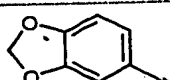




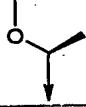
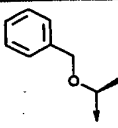
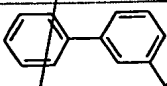
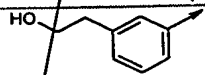
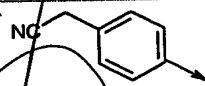
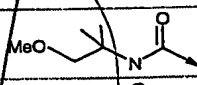
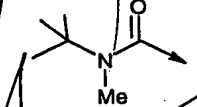
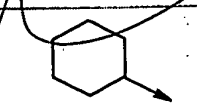
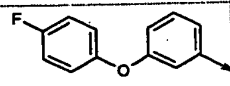
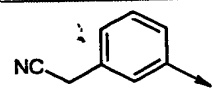
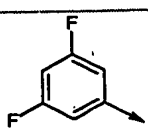
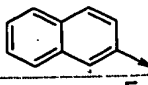
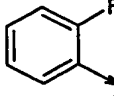
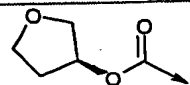
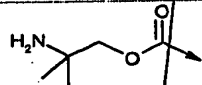
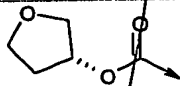
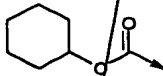
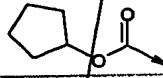
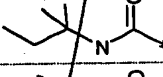
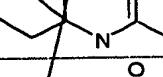
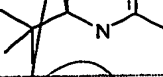
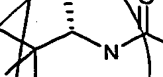
Table 8 Cpd #	B	R ₃	R ₂₂
818		<i>t</i> -Bu	--
819		<i>i</i> -Pr	--
820		<i>i</i> -Pr	--
821		<i>i</i> -Pr	--
822		<i>i</i> -Pr	--
823	Boc	<i>t</i> -Bu	2-OMe
824	Boc	<i>t</i> -Bu	3-OMe
825	Boc	<i>t</i> -Bu	4-OMe
826		<i>i</i> -Pr	--
827		<i>t</i> -Bu	--
828		<i>i</i> -Pr	--
829		<i>t</i> -Bu	--
830		<i>t</i> -Bu	--
831		<i>t</i> -Bu	--
832		<i>t</i> -Bu	--
833		<i>t</i> -Bu	--
834		<i>i</i> -Pr	--

Table 8 Cpd #	B	R ₃	R ₂₂	
835		<i>t</i> -Bu	--	;
836		<i>i</i> -Pr	--	;
837		<i>i</i> -Pr	--	;
838		<i>i</i> -Pr	--	;
839		<i>i</i> -Pr	--	;
840		<i>i</i> -Pr	--	;
841	Boc	<i>t</i> -Bu	2-Me	;
842	Boc	<i>t</i> -Bu	3-Me	;
843	Boc	<i>t</i> -Bu	4-Me	;
844		<i>t</i> -Bu	4-OMe	;
845		<i>i</i> -Pr	--	;
846		<i>i</i> -Pr	--	;
847	Boc	cHex	--	;
848	Boc		--	;
849	Boc		--	;
850	Boc		--	;

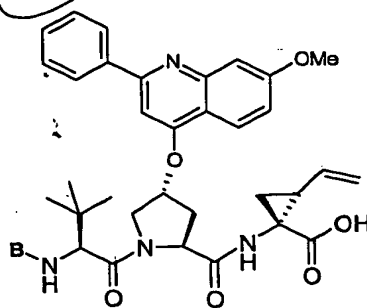
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Table 8 Cpd #	B	R ₃	R ₂₂
851	Boc		--
852	Boc		--
853	Boc		--
854		<i>i</i> -Pr	--
855		<i>i</i> -Pr	--
856		<i>i</i> -Pr	--
857		<i>t</i> -Bu	--
858		<i>t</i> -Bu	--
859		<i>i</i> -Pr	--
860		<i>i</i> -Pr	--
861		<i>i</i> -Pr	--
862		<i>i</i> -Pr	--
863		<i>i</i> -Pr	--
864		<i>i</i> -Pr	--
865		<i>t</i> -Bu	--

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Table 8 Cpd #	B	R ₃	R ₂₂
866		<i>t</i> -Bu	--
867		<i>t</i> -Bu	--
868		<i>t</i> -Bu	--
869		<i>t</i> -Bu	--
870		<i>t</i> -Bu	--
871		<i>t</i> -Bu	--
872		<i>t</i> -Bu	--
and 873		<i>t</i> -Bu	--

63. A compound according to claim 62, selected from the group consisting of compound #: 801 to 825, 827 to 858, and 860 to 873.
64. A compound according to claim 45 represented by the formula:



wherein B is as defined below:

Table 9 Cpd #	B
901	Boc

152

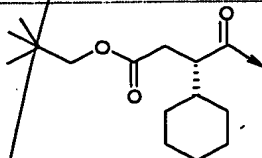
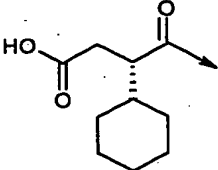
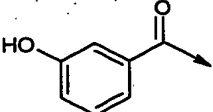
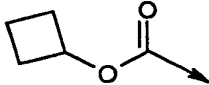
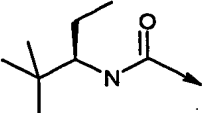
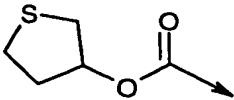
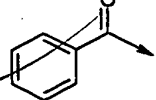
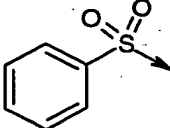
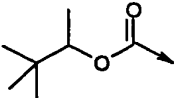
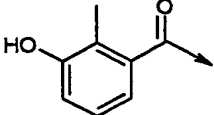
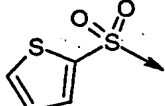
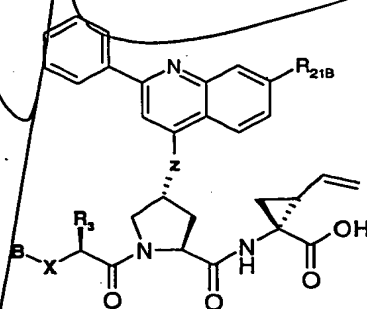
Table 9 Cpd #	B
902	
903	
904	
905	
906	
907	
908	
909	
910	
911	
912	

Table 9 Cpd #	B	
913		;
914		;
915		;
and 916		.

65. A compound according to claim 45 represented by the formula:



wherein B, X, R₃, Z and R₂₁₈ are as defined below:

Table 10 Cpd #	B-X-	R ₃	Z	R ₂₁₈
1001	Ph-N(Me)-	i-Pr	O	H;
1002	Boc-NH-	t-Bu	S	OMe;
and 1003		i-Pr	O	---

38
66.

A pharmaceutical composition comprising an anti-hepatitis C virally effective amount of a compound of formula I according to claim 1, or a therapeutically acceptable salt or ester thereof, in admixture with a pharmaceutically acceptable carrier medium or auxiliary agent.

39
67.

A method of treating a hepatitis C viral infection in a mammal by administering to the mammal an anti-hepatitis C virally effective amount of the compound of formula

40
68.

I according to claim 1, or a therapeutically acceptable salt or ester thereof. A method of treating a hepatitis C viral infection in a mammal by administering to the mammal an anti-hepatitis C virally effective amount of the composition

41
69.

according to claim 1. A method of inhibiting the replication of hepatitis C virus by exposing the virus to a hepatitis C viral NS3 protease inhibiting amount of the compound of formula I

42
70.

according to claim 1, or a therapeutically acceptable salt or ester thereof. A method of treating a hepatitis C viral infection in a mammal by administering thereto an anti-hepatitis C virally effective amount of a combination of the compound of formula I according to claim 1, or a therapeutically acceptable salt or

43
71.

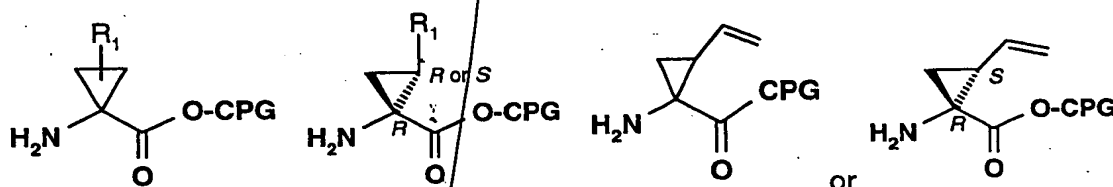
ester thereof with another anti-HCV agent. A method according to claim 70, wherein said other anti-HCV agent is selected from the group consisting of: α - or β -interferon, ribavirin and amantadine.

44
72.

A method according to claim 70, wherein said other anti-HCV agent comprises an inhibitor of other targets in the HCV life cycle, selected from: helicase, polymerase, metalloprotease or IRES.

73.

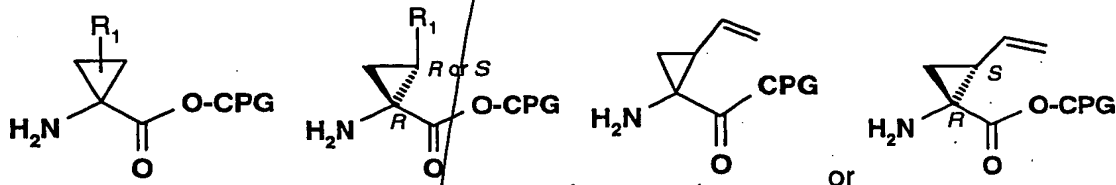
A process for the preparation of a peptide analog of formula (I) wherein P1 is a substituted aminocyclopropyl carboxylic acid residue, comprising the step of: coupling a peptide selected from the group consisting of: APG-P3-P2; or APG-P2; with a P1 intermediate of formula:



wherein R_1 is C_{1-6} alkyl, cycloalkyl or C_{2-6} alkenyl, all optionally substituted with halogen, CPG is a carboxyl protecting group and APG is an amino protecting group and P3 and P2 are as defined above.

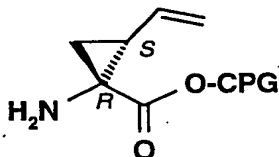
74.

A process for the preparation of: 1) a serine protease inhibitor peptide analog, or 2) a HCV NS3 protease inhibitor peptide analog, this process comprising the step of: coupling a (suitably protected) amino acid, peptide or peptide fragment with a P1 intermediate of formula:



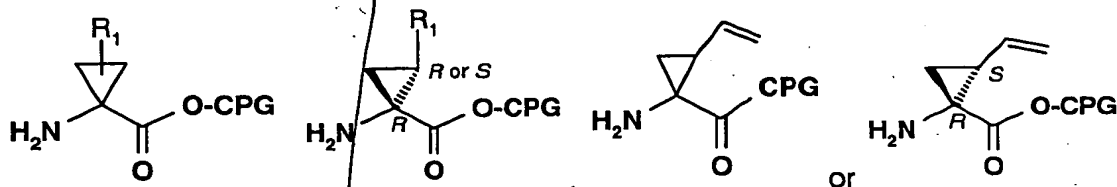
wherein R_1 is C_{1-6} alkyl, cycloalkyl or C_{2-6} alkenyl, all optionally substituted with halogen, and CPG is a carboxyl protecting group.

75. A process for the preparation of: 1) a protease inhibitor peptide analog, or 2) a serine protease inhibitor peptide analog, this process comprising the step of: coupling a (suitably protected) amino acid, peptide or peptide fragment with an intermediate of formula:



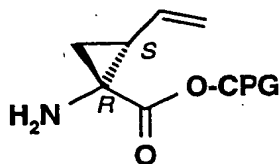
wherein CPG is a carboxyl protecting group.

76. Use of a P1 intermediate of formula:



wherein R_1 is C_{1-6} alkyl, cycloalkyl or C_{2-6} alkenyl, all optionally substituted with halogen and CPG is a carboxyl protecting group, for the preparation of: 1) a serine protease inhibitor peptide analog, or 2) a HCV NS3 protease inhibitor peptide analog.

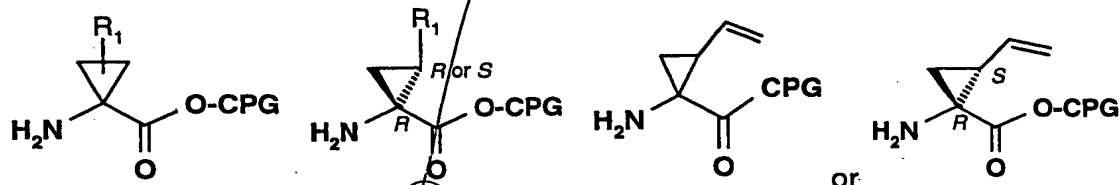
77. Use of an intermediate of formula:



wherein CPG is a carboxyl protecting group, for the preparation of: 1) a protease inhibitor peptide analog, or 2) a serine protease inhibitor peptide analog.

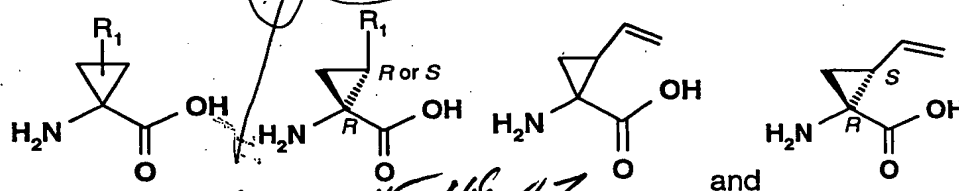
78. Use of a P1 intermediate of formula:

156



wherein R_1 is C_{1-6} alkyl, cycloalkyl or C_{2-6} alkenyl, all optionally substituted with halogen and CPG is a carboxyl protecting group, for the preparation of a compound of formula I as defined above.

79. An amino acid analog compound selected from the group consisting of:

48
80.

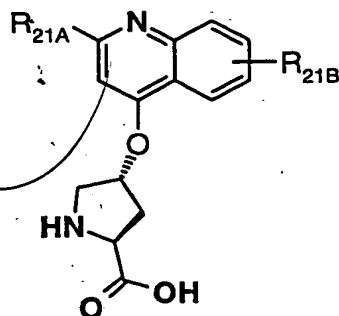
- The process according to claim 73, 74 or 75 wherein said carboxyl protecting group (CPG) is selected from the group consisting of:

alkyl esters, aralkyl esters, and esters being cleavable by mild base treatment or mild reductive means.

81. A process for the resolution of enantiomers from a mixture of (1*R*,2*S*)/(1*S*,2*S*)-1-amino-2-vinylcyclopropyl carboxylic acid methyl ester, comprising the step of treating said mixture with an esterase to obtain the corresponding (1*R*,2*S*) enantiomer.

82. A process according to claim 81, wherein said esterase is Alcalase®.

83. Use of a proline analog of formula:



wherein R_{21A} is C_{1-6} alkyl; C_{1-6} alkoxy; lower thioalkyl; halo; amino optionally mono-substituted with C_{1-6} alkyl; C_6 , C_{10} aryl, C_{7-16} aralkyl or Het, said aryl, aralkyl or Het optionally substituted with R_{22} wherein R_{22} is C_{1-6} alkyl, C_{1-6} alkoxy, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl, or Het; and

R_{21B} is C_{1-6} alkyl, C_{1-6} alkoxy, amino, di(lower alkyl)amino, (lower alkyl)amide, NO_2 , OH, halo, trifluoromethyl, or carboxyl;

for the synthesis of 1) a serine protease inhibitor peptide analog, 2) a HCV NS3 protease inhibitor peptide analog, or 3) a peptide analog of formula I.

84. Use of an anti-hepatitis C virally effective amount of the compound of formula I according to claim 1, or a therapeutically acceptable salt or ester thereof for the preparation of a composition for treating a hepatitis C viral infection in a mammal.
85. Use of a hepatitis C viral NS3 protease inhibiting amount of the compound of formula I according to claim 1, or a therapeutically acceptable salt or ester thereof for the preparation of a composition for inhibiting the replication of hepatitis C virus.
86. Use of an anti-hepatitis C virally effective amount of a combination of the compound of formula I according to claim 1, or a therapeutically acceptable salt or ester thereof, and an interferon for the preparation of a composition for treating a hepatitis C viral infection in a mammal.

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